ISSN 0032-8332

PRIMATES

A JOURNAL OF PRIMATOLOGY

Vol. 33 1992

PUBLISHED QUARTERLY BY

JAPAN MONKEY CENTRE

PRIMATES A JOURNAL OF PRIMATOLOGY

FOUNDED 1957

PRIMATES is an international journal of primatology, whose general object is to provide facilities for the elucidation of the entire aspect of primates in connection with man. It publishes original papers that contribute to the development of the scientific study of primates and its scope embraces work in all fields of investigation, such as morphology, physiology, psychology, behavior, ecology, sociology, systematics, evolution, laboratory primate medicine, etc. In addition to original papers, brief notes, research reports, and review articles are included.

PRIMATES is published quarterly, and four numbers form one volume.

Persons who wish to contribute are advised to study the *Information for Contributors* printed inside the back cover and to follow the requested procedure carefully.

EDITORIAL BOARD 1990–92

Chief Editor: MASAO KAWAI, *Japan Monkey Centre*

Editors:

TOSHIO ASANO, *Aichi University*
AKIYOSHI EHARA, *Sugiyama Jogakuen Univ.*
NAOSUKE ITOIGAWA, *Osaka University*
MITSUO IWAMOTO, *Kyoto University*
TOSHITAKA IWAMOTO, *Miyazaki University*
KOSEI IZAWA, *Miyagi Univ. of Education*
TAKAYOSHI KANO, *Kyoto University*
KIYOKO MUROFUSHI, *Ritsumeikan University*
HIDEO NIGI, *Nippon Vet. & Anim. Sci. Univ.*
TOSHISADA NISHIDA, *Kyoto University*
KEN NOZAWA, *Chukyo University*
HIDEYUKI OHSAWA, *Kyoto University*
YUKIMARU SUGIYAMA, *Kyoto University*

ADVISORY BOARD 1990–92

R. I. M. DUNBAR, *University College London*
TOMOO ENOMOTO, *Tokai University*
LINDA M. FEDIGAN, *University of Alberta*
A. H. HARCOURT, *Univ. of California, Davis*
MARIKO HASEGAWA, *Senshu University*
TOSHIKAZU HASEGAWA, *The University of Tokyo*
SHIGEO HONJO, *Tokyo*
GOICHI ISHIMOTO, *Mie Univ. Sch. of Medicine*
KENJI KAWANAKA, *Okayama Univ. of Science*
NAOKI KOYAMA, *Kyoto University*
HIROKO K.-HIROTANI, *Kanagawa Pref. Museum*
TAMAKI MARUHASHI, *Musashi University*
NOBUO MASATAKA, *The University of Tokyo*
W. A. MASON, *Univ. of California, Davis*
KIYOAKI MATSUBAYASHI, *Kyoto University*
TETSURO MATSUZAWA, *Kyoto University*
W. C. MCGREW, *Miami University*
E. W. MENZEL, JR., *State Univ. of New York*
TETSUHIRO MINAMI, *Osaka University*
AKIO MORI, *Kyoto University*
UMEYO MORI, *Nagoya Bunri College*
KOICHI NEGAYAMA, *Mukogawa Women's Univ.*
MASUMI NOZAKI, *Kyoto University*
J.-J. PETTER, *Mus. Nat. Hist. Naturelle*
J. G. ROBINSON, *Wildlife Conserv. International*
KAREN B. STRIER, *Univ. of Wisconsin, Madison*
YUKIO TAKAHATA, *Naruto Univ. of Education*
OSAMU TAKENAKA, *Kyoto University*
SHIGEO UEHARA, *Sapporo University*
CHRISTIAN VOGEL, *Universität Göttingen*
JUICHI YAMAGIWA, *Kyoto University*

Contributions, materials for announcement, and new books for review should be sent to:
Dr. MASAO KAWAI, Chief Editor, PRIMATES
Japan Monkey Centre, Inuyama, Aichi, 484 Japan

The annual subscription price including postage: Inland, ¥22,700 (including Consumption Tax) for institutions, ¥15,500 (including Consumption Tax) for individuals; abroad, ¥22,000 for institutions, ¥15,000 for individuals. As to the prices of back issues, please send inquiries to the Editorial Office. Subscription orders, remittances, and business correspondence should be addressed to:

PRIMATES, Editorial Office
Japan Monkey Centre, Inuyama, Aichi, 484 Japan

Published by JAPAN MONKEY CENTRE, Inuyama, Aichi, Japan, 1992 ©
Director: MASAO KAWAI
Printed by KUZO DOGURA, Kyoto

CONTENTS

Vol. 33 No. 1, January 1992

WATANABE, KUNIO, AKIO MORI, and MASAO KAWAI: Characteristic Features of the Reproduction of Koshima Monkeys, *Macaca fuscata fuscata*: A Summary of Thirty-four Years of Observation 1

KOYAMA, NAOKI, YUKIO TAKAHATA, MICHAEL A. HUFFMAN, KOSHI NORIKOSHI, and HISAYO SUZUKI: Reproductive Parameters of Female Japanese Macaques: Thirty years Data from the Arashiyama Troops, Japan 33

ITOIGAWA, N., T. TANAKA, N. UKAI, H. FUJII, T. KUROKAWA, T. KOYAMA, A. ANDO, Y. WATANABE, and S. IMAKAWA: Demography and Reproductive Parameters of a Free-ranging Group of Japanese Macaques (*Macaca fuscata*) at Katsuyama 49

DUNBAR, R. I. M.: A Model of the Gelada Socio-ecological System 69

WU, HAI-YIN and YAO-SUNG LIN: Life History Variables of Wild Troops of Formosan Macaques (*Macaca cyclopis*) in Kenting, Taiwan 85

PRICE, ELUNED C.: Changes in the Activity of Captive Cotton-top Tamarins (*Saguinus oedipus*) over the Breeding Cycle 99

SILVA, BARBARA T. F., MARIA I. C. SAMPAIO, HORACIO SCHNEIDER, MARIA P. C. SCHNEIDER, ENRIQUE MONTOYA, FILOMENO ENCARNACIÓN, and FRANCISCO M. SALZANO: Natural Hybridization Between *Saimiri* Taxa in the Peruvian Amazonia 107

Short Communications

DE MONTE, MICHELE, JAMES R. ANDERSON, and HELENE CHARBONNIER: Self-aggression in Stumptail Macaques: Effects of Frustration and Social Partners 115

YOSHIKAWA, YOSHIYASU and TOSHIO DEGUCHI: Sexual Dimorphism of the Canine Roots in the *Macaca fuscata* 121

MORBECK, MARY ELLEN, ALISON GALLOWAY, and ADRIENNE L. ZIHLMAN: Gombe Chimpanzee Sex Differences in the Pelvis and Observations of Pubic and Preauricular Areas 129

HAYAMA, SHIN-ICHI, SHINJI KAMIYA, ATSUKO YAMAZAKI, MASAYUKI DAIGO, and HIDEO NIGI: Lipofuscin in the Corpus Luteum of Macaque Ovaries 133

ARNAUD, J., B. MEIER, J. M. DUGOUJON, and Y. RUMPLER: Study of the Variability of Erythrocyte Enzymes in Captive and Wild Populations of the Black Lemur (*Eulemur macaco macaco*). An Indispensable Preliminary in Captive Breeding Programmes 139

Book Reviews 147

Date of Publication: February 20, 1992

Vol. 33 No. 2, April 1992

HAMAI, MIYA, TOSHISADA NISHIDA, HIROYUKI TAKASAKI, and LINDA A. TURNER: New Records of Within-group Infanticide and Cannibalism in Wild Chimpanzees 151

IHOBE, HIROSHI: Male-male Relationships Among Wild Bonobos (*Pan paniscus*) at Wamba, Republic of Zaire 163

GIACOMA, CRISTINA and PATRIZIA MESSERI: Attributes and Validity of Dominance Hierarchy in the Female Pigtail Macaque 181

AIMI, MITSURU and AMSIR BAKAR: Taxonomy and Distribution of *Presbytis*

melalophos Group in Sumatera, Indonesia 191
Ross, Caroline: Life History Patterns and Ecology of Macaque Species 207
Melo, Ana Claudia do Amaral, Maria Iracilda da Cunha Sampaio, Maria Paula Cruz Schneider, and Horacio Schneider: Biochemical Diversity and Genetic Distance in Two Species of the Genus *Saguinus* 217
Meireles, C. M. M., M. I. C. Sampaio, H. Schneider, and M. P. C. Schneider: Protein Variation, Taxonomy and Differentiation in Five Species of Marmosets (Genus *Callithrix* Erxleben, 1777) 227
Pieczarka, Julio Cesar, Regina Maria de Souza Barros, Cleusa Yoshiko Nagamachi, Raul Rodrigues, and Alvaro Espinel: *Aotus vociferans* × *Aotus nancymai*: Sympatry Without Chromosomal Hybridation 239

Short Communications

Ihobe, Hiroshi: Observations on the Meat-eating Behavior of Wild Bonobos (*Pan paniscus*) at Wamba, Republic of Zaire 247
Champoux, Maribeth, Evan Byrne, Roberta DeLizio, and Stephen J. Suomi: Motherless Mothers Revisited: Rhesus Maternal Behavior and Rearing History 251
Nakakuki, Shoichi and Akiyoshi Ehara: The Lobular Division, Bronchial Tree and Blood Vessels of the Squirrel Monkey Lung 257
Nakakuki, Shoichi: The Bronchial Tree and Lobular Division of the Chimpanzee Lung 265
Ferguson, Walter W.: "*Australopithecus afarensis*": A Composite Species 273

Research Report

Matsubayashi, Kiyoaki, Shunji Gotoh, Yoshi Kawamoto, Tsuyoshi Watanabe, Ken Nozawa, Masao Takasaka, Toyoko Narita, Owen Griffiths, and Mary-Ann Stanley: Clinical Examinations on Crab-eating Macaques in Mauritius 281

Date of Publication: May 31, 1992

Vol. 33 No. 3, July 1992

Perloe, Sidney I.: Male Mating Competition, Female Choice and Dominance in a Free Ranging Group of Japanese Macaques 289
Grieser, Bettina: Infant Development and Parental Care in Two Species of Sifakas 305
Renner, Michael J., A. J. Bennett, M. L. Ford, and P. J. Pierre: Investigation of Inanimate Objects by the Greater Bushbaby (*Otolemur garnettii*) 315
Cozzolino, Roberto, Carla Cordischi, Filippo Aureli, and Stefano Scucchi: Environmental Temperature and Reproductive Seasonality in Japanese Macaques (*Macaca fuscata*) 329
Kholkute, S. D., Rohini K. Patil, and C. P. Puri: Effects of Metachlopromide-induced Hyperprolactinemia on Serum Testosterone and Its Response to hCG in Adult Male Common Marmosets (*Callithrix jacchus*) 337
Hunt, Kevin D.: Social Rank and Body Size as Determinants of Positional Behavior in *Pan troglodytes* 347
Kimura, Kunihiko, Yutaka Takahashi, Sotaro Iwamoto, and Masayoshi Konishi: Morphology of Diaphragm in the Crab-eating Monkey (*Macaca fascicularis*) 359
Jablonski, Nina G.: Dental Agenesis as Evidence of Possible Genetic Isolation in

the Colobine Monkey, *Rhinopithecus roxellana* 371
CAMERON, DAVID W.: A Morphometric Analysis of Extant and Early Miocene Fossil Hominoid Maxillo-dental Specimens 377
DA ROCHA, ROSSINEIDE MARTINS, MARIA LÚCIA HARADA, and HORACIO SCHNEIDER: ABO Blood Groups in Cebidae (Platyrrhini, Primates) from the Rio Jamari Region 391
DIERENFELD, ELLEN S., FRED W. KOONTZ, and RICHARD S. GOLDSTEIN: Feed Intake, Digestion and Passage of the Proboscis Monkey (*Nasalis larvatus*) in Captivity 399

SHORT COMMUNICATIONS

KYES, RANDALL C., K. E. MAYER, and B. N. BUNNELL: Perception of Stimuli Presented as Photographic Slides in Cynomolgus Macaques (*Macaca fascicularis*) 407
NAKAMICHI, MASAYUKI, SHINJI, IMAKAWA, YASUO KOJIMA, and AYUKO NATSUME: Parturition in a Free-ranging Japanese Monkey (*Macaca fuscata*) 413

INFORMATION

Guidelines for the Study of Wild Primates and Use of Wild-born Primates 419

BOOK REVIEW 427

Date of Publication: August 15, 1992

Vol. 33 No. 4 , October 1992

SURYOBROTO, BAMBANG: Estimation of the Biological Affinities of Seven Species of Sulawesi Macaques Based on Multivariate Analysis of Dermatoglyphic Pattern Types 429
ISLAM, M. A. & M. M. FEEROZ: Ecology of Hoolock Gibbon of Bangladesh 451
KIMURA, TASUKU: Hindlimb Dominance During Primate High-speed Locomotion 465
HAYES, V. J., S. P. HENZI, L. FREEDMAN, and D. GAYNOR: The Differential Use of Cheek Pouches in a Troop of *Papio ursinus* 477
HARRISON, TERRY: A Reassessment of the Taxonomic and Phylogenetic Affinities of the Fossil Catarrhines from Fort Ternan, Kenya 501
YAMAGIWA, JUICHI: Functional Analysis of Social Staring Behavior in an All-male Group of Mountain Gorillas 523

SHORT COMMUNICATIONS

FIMBEL, CHERYL C.: Cross-species Handling of Colobine Infants 545
AGORAMOORTHY, GOVINDASAMY and RASANAYAGAM RUDRAN: Adoption in Free-ranging Red Howler Monkeys, *Alouatta seniculus* of Venezuela 551
BÖER, MICHAEL and VÖLKER SOMMER: Evidence for Sexually Selected Infanticide in Captive *Cercopithecus mitis, Cercocebus torquatus*, and *Mandrillus leucophaeus* 557

INFORMATION 565

Date of Publication: November 15, 1992